



## Operation Manual



NIGHT VISION MONOCULAR

**PYGMY 2M**

105 Sparks Ave., Toronto, ON, M2H 2S5, Canada



# IMPORTANT INFORMATION

## Read prior to activation

You have just purchased a complicated electronic device. To operate it properly, please read this manual carefully. Here are some common Precautions that must be noted.

- **NEVER** expose the opened objective lens of an active unit in daylight. At daytime objective lens must be covered by caps. There is a tiny hole in the cap to provide enough light for day time operation.
- **NEVER** aim active unit at intense light sources (i.e. lights, headlamps, campfires, the Moon, etc.)
- **NEVER** reverse the polarity of a battery
- **NEVER** disassemble the unit
- **NEVER** connect the unit to external power sources
- **ALWAYS** remove batteries when not in use for a long period
- **ALWAYS** keep the objective lenses covered when not in use
- **ALWAYS** store in a warm dry place when not in use

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**Thank you for purchasing PYGMY 2M.**

**Please read all the instructions carefully prior to use.**

**Failure to follow the instructions may void the warranty.**

## **1. Brief Description**

PYGYMY 2M Night Vision Monocular, named for its small size, is feather light, compact, and very durable. It has excellent image resolution and high light gain capability.

PYGYMY 2M is designed for a variety of applications related to observing remote objects and orientation in the field or at sea at night with no artificial lighting.

Built-in IR illuminator enables bright image even in total darkness.

Demonstration of the unit in a brightly lit room may be conducted for no longer than 3 minutes and with lens cap closed. The device should never be aimed at bright light.

## 2. Delivery set

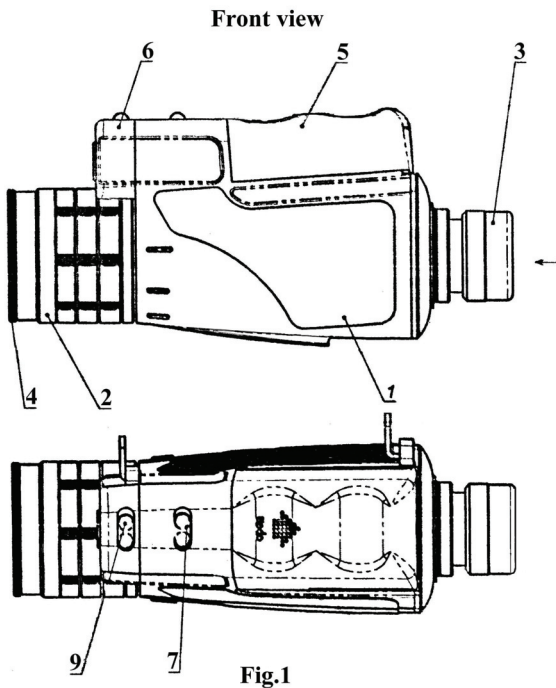
PYGMY 2M is supplied with the following components:

	Quantity
PYGMY 2M	1
Carrying case	1
Hand Strap	1
User's manual	1
Warranty Card	1
AA battery	1

### 3. Specifications

Magnification, x	$2.2 \pm 0.34$
Objective lens, mm	41.67
Field of View, min	12°
Diopter Adjustment	$\pm 4$
Focusing Range, m	5 - $\infty$
Focal length:	
- Objective lens, mm	50 / F1.2
- Eyepiece	12
Resolution at ambient illumination of 0,2 Lux (center), angular seconds	175
Lens Coating	Fully multi-coated optics
Battery	2 (AA)
Allowed illumination, lx	$5 \times 10^{-3} / 1$
Operational temperature range	-25° ... +40°C
Storage temperature range	-45° ... +85°C
Relative Humidity, max	80% at 20°C
Dimensions, mm	172x80x60
Weight, g	440

## 4. APPEARANCE OF THE DEVICE





Rear view

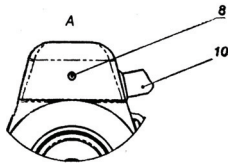
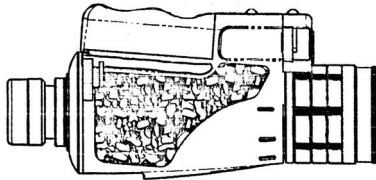


Fig.2

- |                                 |                               |
|---------------------------------|-------------------------------|
| 1- Body                         | 2- Objective lens             |
| 3 - Eyepiece                    | 4 – Objective lens cap        |
| 5 – Battery compartment         | 6 - IR Illuminator            |
| Cover                           |                               |
| 7 – Power On/Off Switch         | 9 – Illuminator On/Off switch |
| 8 – IR Illuminator ON indicator | 10 – Hand strap               |

## 5. Operation Instructions

### **WARNING!**

**Never operate your night vision device at daylight without the lens cover on! Never direct the lens to bright light!**

#### **5.1. Prior to use**

- Unpack the device.
- Switch (9) and (7) (Fig.1) must be in the OFF- position.
- Attach the hand strap if necessary.
- Remove battery compartment cover (5) by sliding it out;
- Insert 2 AA batteries in the battery compartment observing correct polarity as shown at the bottom of the battery - compartment
- Close the battery compartment cover (5).
- PYGMY 2M is ready for operation

#### **5.2. Testing of operation**

Turn on the device-using switch (7). Lens cap (4) must be on. Direct the device to an object placed within 10 – 20 m from the viewer. Image will appear in green. Achieve the sharpest image on the screen by rotating the eyepiece (3). For close focusing rotate the front lens (2)

### **5.3. Operation at night**

**AT MOON LIGHT:** Take off the lens cap (4). Turn on the device using switch (7).

#### **AT INSUFFICIENT AMBIENT ILLUMINATION**

Turn on the device using switch (7). Turn switch (9) into ON position. The IR illuminator ON-indicator (8) should glow.

When finishing the observation, turn slide switch (9) into OFF position. The indicator (8) should not glow. Turn the power supply switch (7) into OFF position. Close the objective lens with lens cap (4).

When the device is not in use for a long time remove batteries from the battery compartment. This will prevent damage of contacts in the battery compartment from possible leakage of the batteries.

## 6. STORAGE AND MAINTENANCE

**Warning!** After transportation or keeping the device at temperature lower than  $-25^{\circ}\text{C}$  ( $-13^{\circ}\text{F}$ ), the device must be warmed up to ambient temperature from  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ ) to  $+40^{\circ}\text{C}$  ( $104^{\circ}\text{F}$ ) during 2-3 hours.

**Precautions:** PYGMY 2M is a sophisticated precision optical instrument equipped with electronics. Therefore, it should be handled with due care.

- Keep your device away from direct sunlight, impacts, dust, moisture, and sharp changes of temperatures.
- Do not keep the device at temperatures higher than  $50^{\circ}\text{C}$  ( $122^{\circ}\text{F}$ ).
- Do not touch the optical surfaces with fingers. Doing so may damage the anti-reflection coating.
- Do not take the cover off the lens if not necessary.
- Avoid shocks and sharp jolts.
- Make sure to switch off the unit during periods of non-operation.

- Due to the considerable optical magnification of the eyepiece some small structures inside the tube coating in the form of dark and/or white spots may be seen in the field of view. This does not affect the functional ability of the device.
- The resolution may vary from the center towards the perimeter of the field of view. This is an inherent feature of the image tube type utilized in the device. We recommend placing the scene of observation in the center of the field of view.
- Clean optical surfaces with professional camera lens cleaning supplies only.
- To clean the exterior of the device use a soft clean cloth.
- Keep away from heating appliances and central heating.
- Remove the batteries when storing the device for long period of time.
- Do not apply excessive force to lens assembly, agile elements and thread connections.
- Repairs can only be done by the manufacturer.

## **7. TROUBLESHOOTING**

### **7.1. The monocular does not work.**

Check that the batteries are installed properly.

Check the charge of the batteries. Replace batteries if necessary.

### **7.2. The image does not appear in focus.**

Bring object to the center of the image. Turning the eyepiece (3) and the objective lens (2) obtain the most clear-cut image. If the image still does not seem in focus, clean the lenses; they could be foggy or dusty.

### **7.3. Image flashes**

It is normal for the unit to flash within the first 2 minutes of activation. Flashing may continue longer if unit is exposed to bright light. This may happen even with the cap closed!

### **7.4. Condensation accumulates on the parts.**

When the unit is brought from cold into a warm environment, it has to warm up for up to 5 hours. Only then it is allowed to be turned ON again.

### **7.5. Visibility decreases and / or disappears.**

Bright light sources (moon, projectors or headlights) may cause visibility to degrade or even completely disappear. Move the scope away from the light source immediately.

The image should be restored in within 2 minutes.

Poor visibility, such as fog or haze, or extremely dark environments, will decrease the observation distance.

## 8. WARRANTY

**NEWCON** warrants this product against defects in material and workmanship for one year from the date of the original purchase, but no more than 18 months from the date of manufacturing. Longer warranty is available, subject to the terms of the specific sales contract. Should your Newcon product prove to be defective during this period, please deliver the product securely packaged in its original container or an equivalent, along with the proof of the original purchase date, to your Newcon Dealer.

Newcon will repair (or at its option replace with the same or comparable model), the product or part thereof, which, on inspection by Newcon, is found to be defective in materials or workmanship.

### *What This Warranty Does Not Cover:*

NEWCON is not responsible for warranty service should the product fail as a result of improper maintenance, misuse, abuse, improper installation, neglect, damage caused by disasters such as fire, flooding, lightning, improper power supply, or service other than by a NEWCON Authorized Service.

Postage, insurance, and shipping costs incurred while presenting your NEWCON product for warranty service are your responsibility.



If shipping from North America, please, include a cheque or money order payable to NEWCON OPTIK for the amount of \$15.00 to cover handling and return shipping.

## 9. CUSTOMER SUPPORT

Should you experience any difficulties with your NEWCON OPTIK product, consult the enclosed manual. If the problem remains unresolved, contact our customer support department at (416) 663-6963 or toll free at 1-877-368-6666. Our operating hours are 9am-5pm, Monday - Friday, Eastern Standard Time.

**At no time should equipment be sent back to Newcon without following the instructions of our technical support department. Newcon accepts no responsibility for unauthorized returns.**

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To locate NEWCON Authorized Dealer call:

Tel: (416) 663-6963 Fax: (416) 663-9065

Email: [newconsales@newcon-optik.com](mailto:newconsales@newcon-optik.com)

Web: [www.newcon-optik.com](http://www.newcon-optik.com)

The defective products should be shipped to:

**From the USA only:**

2331 Superior Ave. Cleveland, OH 44114

**From all other countries:**

105 Sparks Ave., Toronto, ON

M2H 2S5, CANADA

## 10. ACCEPTANCE CERTIFICATE

*NIGHT VISION DEVICE PYGMY 2M*

Serial number: \_\_\_\_\_

Complies with all technical specifications and has passed the inspection.

Date of production: \_\_\_\_\_

Quality Inspector: \_\_\_\_\_

Quality Assurance Seal

NEWCON OPTIK™ 2010

Printed in Canada